



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,616	07/21/2003	Peter Neumann	GKN-0135	6595

23377 7590 03/10/2005

WOODCOCK WASHBURN LLP  
ONE LIBERTY PLACE, 46TH FLOOR  
1650 MARKET STREET  
PHILADELPHIA, PA 19103

EXAMINER
----------

SAVAGE, MATTHEW O

ART UNIT	PAPER NUMBER
----------	--------------

1724

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/624,616

**Applicant(s)**

NEUMANN ET AL.

**Examiner**

Matthew O Savage

**Art Unit**

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 4 and 6-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8-29-03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Applicant's election with traverse of group I and the species of the first layer including reducible metal oxides in the reply filed on 1-14-05 is acknowledged. Applicant's notation that claim 1 is generic with respect to claims 2-6 is noted and agreed with, however, the claim is not considered generic with respect to all the species disclosed in the instant specification. Accordingly, claims 1-3 and 5 will be examined and the remaining claims withdrawn from consideration as being directed to non-elected species and inventions.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to lines 15-16 of claim 1, it is unclear as to what depth "approximately five pore plies" implies.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaddis et al in view of Anderson et al.

With respect to claim 1, Gaddis et al disclose a filter having a graduated structure (see FIG. 2) including a first and second layers each having a different pore size (e.g., since the particles used to form the layers have different sizes, see lines 20-34 of page 2), the pore size of the first layer being within a range of approximately 0.01-1 micron (e.g., since the layer is formed from particles having a size between .2-1 micron falling within applicant's particle size range of .001-.3 micron disclosed in paragraph 10 of the instant specification) the filter being manufactured from sinterable materials (e.g., stainless steel and titanium oxide), the first layer being formed from a metal oxide material (e.g., titanium oxide), the second layer is formed from a metallic material (e.g., stainless steel), the third layer including a coarse and porous supporting body formed from a metallic material (e.g., stainless steel, the metal oxide material of the first layer penetrates into the second layer to a depth of approximately one to approximately five pore plies (see the preamble of claims 1 and 10), the pore size of the first layer is approximately 1/3 to approximately 1/6 of the pore size of the second layer (e.g., the pore size of the second layer disclosed to range from .5-10 microns, the pore size of the first layer estimated to range from .004-.216 micron, based on a particle size of .2-1 micron). Alternately, such a modification in pore size, for example, by changing the particle size of the particles forming the first layer, would have been obvious in order to optimize the filter for a particular application. Gaddis fails to specify a third layer. Anderson et al discloses an analogous filter including a third layer or support layer having a different pore size than the second and third layers and suggests that such an arrangement provides additional strength to the filter (see FIG. 2 and from line 51 of col.

Art Unit: 1724

5 to line 34 of col. 6 and lines 11-23 of col. 18). It would have been obvious to have modified the filter of Gaddis et al so as to have included a third layer as suggested by Anderson et al in order to increase the strength of the filter. Gaddis et al and Anderson et al fail to specify a thickness of the first layer as being within a range of approximately 0.5 - 50 micron and a thickness of the second layer as being within a range of approximately 5-300 microns, however, such a modification would have been obvious in order to optimize the strength of the filter with respect to the pressure drop across the filter for a particular application. Gaddis et al and Anderson et al fail to specify the first layer as being formed using a suspension having a viscosity within a range of approximately 0.003 pas to approximately 0.96 pas, however, such a limitation relates to a method step of making a filter and does not accord patentable weight to the claim unless applicant can show that such a step results in a filter having a materially different structure than that suggested by the prior art.

As to claim 2, Gaddis et al disclose the pore size of the first layer as being within a range of .05-.6 micron (e.g., .004-.216 micron).

Concerning claim 3, Gaddis et al disclose a metal oxide that is difficult to oxidize (e.g., titanium oxide).

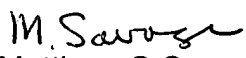
Concerning claims 3 and 5, Anderson et al disclose a reducible oxide (e.g., iron oxide, see line 35 of col. 8).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew O Savage whose telephone number is (571) 272-1146. The examiner can normally be reached on Monday-Friday, 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Matthew O Savage  
Primary Examiner  
Art Unit 1724

mos  
March 8, 2005